SUDOVIKOV, N.G.; NEYELOV, A.N.

Age of the Stanovoy complex. Trudy Lab.geol.dokem. no.12:257-280 '61. (MIRA 14:11)

(Stanovoy Range--Geological time)

SUDOVIKOV, N.G.

Conditions governing the endogenetic formation of ores in the Pre-Cambrian. Uch.zap. LGU no.312:7-25 '62. (MIRA 15:6)
(Ore deposits)

SUDOVIKOV, N.G.; DRUGOVA, G.M.; KRYLOVA, M.D.; MIKHAYLOV, D.A.

Tectonic pattern of Archean formations in the Aldan mining region. Izv. AN SSSR. Ser.geol. 27 no.11:95-100 N '62. (MIRA 15:12)

1. Laboratoriya geologii dokembriya AN SSSR, Leningrad.
(Aldan Plateau--Geology, Structural)

KITSUL, Vasiliy Ivanovich; SUDOVIKOV, N.G., prof., otv. red.; KALANTAROV, A.P., red. izd-va; GUSEVA, A.P., tekhn. red.

[Petrology of carbonate rocks in the Ladoga formation] Petrologiia karbonatnykh porod Ladozhskoi formatsii. Moskva, Izd-vo Akad. nauk SSSR, 1963. 170 p. (MIRA 16:5)
(Ladoga Lake region--Rocks, Carbonate)

DZEVANSKIY, Yu.K.; DODIN, A.L.; KONIKOV, A.Z.; KRASNYY, L.I.; MAN'KOVSKIY, V.K.; MOSHKIN, V.N.; LYATSKIY, V.B.; NIKOL'SKAYA, I.P.; SALOP, L.I.; SALUN, S.A.; RABKIN, M.I.; RAVICH, M.G.; POSPELOV, A.G.; NIKOLAYEV, A.A.; IL'IN, A.V.; BUZIKOV, I.P.; MASLENNIKOV, V.A.; NEYELOV, A.N.; NIKITINA, L.P.; NIKOLAYEV, V.A.[deceased]; OBRUCHEV, S.V.; SAVEL'YEV, A.A ; SEDOVA, I.S.; SUDOVIKOV, N.G.; KHIL'TOVA, V.Ya.; NAGIBINA, M.S.; SHEYNMANN, Yu.M.; KUZNETSOV , V.A.; KUZNETSOV, YU.A.; BORUKAYEV, R.A.; LYAPICHEV, G.F.; NALIVKIN, D.V., glav. red.; VERESHCHAGIN, V.N., zam. glav. red.; MENNER, V.V., zam. glav. red.; OVECHKIN, N.K., zam. glav. red.[deceased]; SOKOLOV, B.S., red.; SHANTSER, Ye.V., red.; MODZALEVSKAYA, Ye.A., red.; CHUGAYEVA, M.N., red.; GROSSGEYM, V.A., red.; KELLER,B.M., red.; KIPARISOVA, L.D., red.; KOROBKOV, M.A., red.; KRASNOV, I.I., red.; KRYMGOL'TS, T.Ya., red.; LIBROVICH, L.S., red.; LIKHAREV, B.K., red.; LUPPOV, N.P., red.; NIKIFOROVA, O.I., red.; POLKANOV, A.A., red.[deceased]; RENGARTEN, V.P., red.; STEPANOV, D.L., red.; CHERNYSHEVA, N.Ye., red.; SHATSKIY, N.S., red.[deceased]; EBERZIN, A.G., red.; SMIRNOVA, Z.A., red.izd-va; GUROVA, O.A., tekhn. red.

[Stratigraphy of the U.S.S.R. in fourteen volumes. Lower Pre-Cambrian] Stratigrafiia SSSR v chetyrnadtsati tomakh. Nizhnii Dokembrii. Moskva, Gos. nauchno-tekhn. izd-vo litury po geologii i okhrane nedr. Pt. 1 (Asiatic part of the USSR) 1963. 396p.

SUDOVIKOV, N.G.

Regional metamorphism and geosynclinal development. Vop. magm. i metam. 1:77-91 '63. (MIRA 16:8)

(Metamorphism (Geology))
(Geology, Structural)

SUDOVIKOV, N.G.; KHRENOV, P.M.

Sixth session of the Association on the Study of Crustal Subsurface Zones. Izv. AN SSSR. Ser.geol. 28 no.6:133-136 Je '63. (MIRA 16:8)

(Earth--Surface)

SUDOVIKOV, N.G., doktor geol.-mineral.nauk

Session of the International Association for the Study of the Sub-surface Zones of the Earth Crust. Vest.AN SSSR 33 no.2:102-104 F '63. (MIRA 16:2)
(Alps--Geology)

SUDOVIKOV, Nikolay Georgiyevich; SKORYNINA, N.P., red.; YELIZAROVA, N.A., tekhn. red.

[Regional metamorphism and some problems of petrology] Regional'nyi metamorfizm i nekotorye problemy petrologii. Leningrad, Izd-vo Leningr. univ., 1964. 549 p. (MIRA 17:4)

SUDOVIKOV, N.G.

Current trends in the study of metamorphism. Vest. LGU 19 no.12[illegible]-16 '64. (MIRA 17:8)

SUDOVIKOV, Nikolay Georgiyevich, doktor geol.-miner. nauk; GLEBOVITSKIY, Viktor Andreyevich; DRUGOVA, Galina Mikhaylovna; KRYLOVA, Melitina Dmitriyevna; NEYELOV, Aleksandr Nikolayevich; SELOVA, Irina Sergeyevna;

[Geology and petrology of the southern margin of the Aldan Shield] Geologiia i petrologiia iuzhnogo obramleniia Aldanskogo shchita. [By] N.G.Sudovikov i dr. Moskva, Nauka, 1965. 289 p. (MIRA 18:3)

RAVICH, M.G.; KLIMOV, L.V.; SOLOV'YEV, D.S.; SOLOVIKOV, N.G., doktor geol.-mineral. nauk, red.

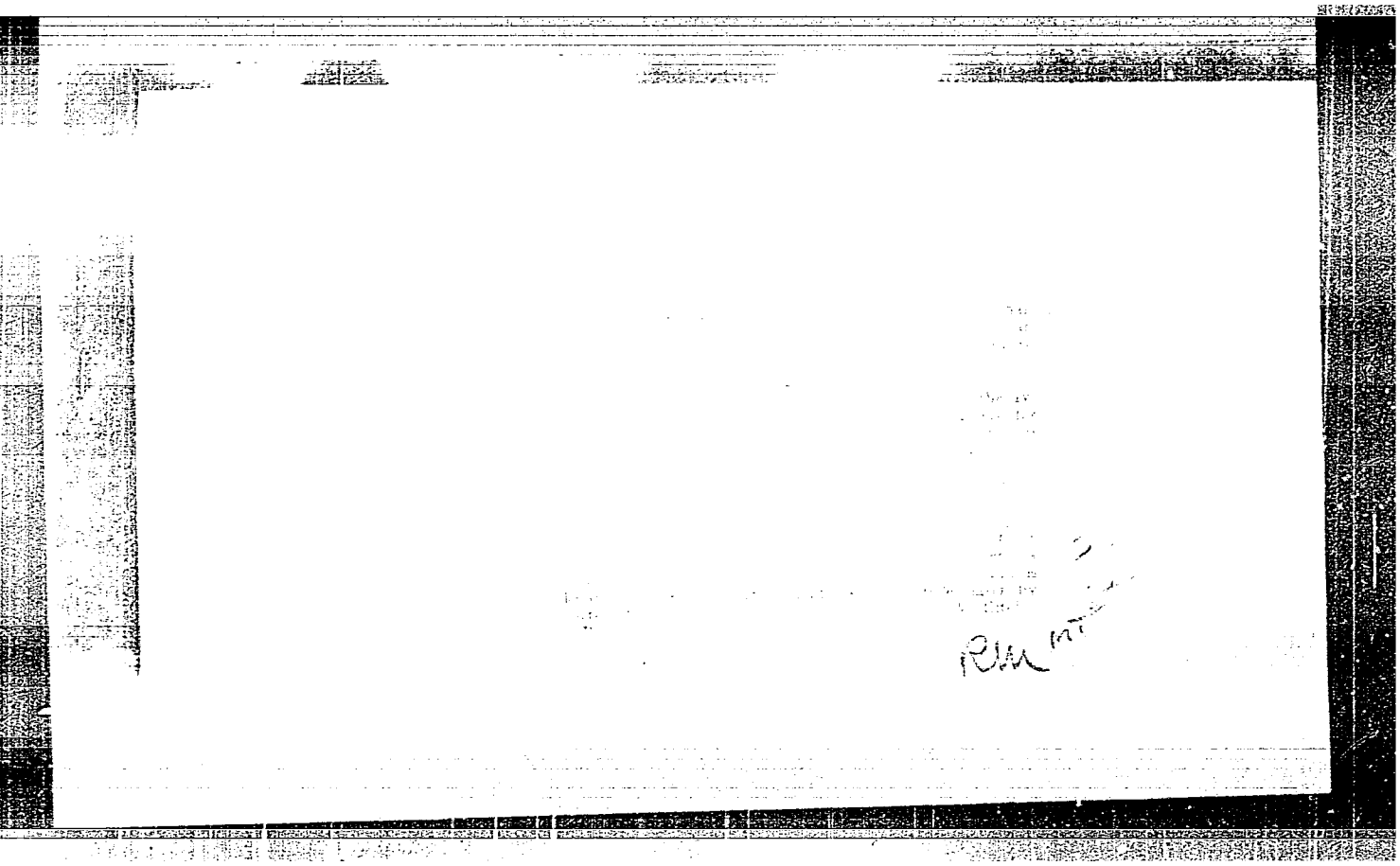
[Pre-Cambrian of eastern Antarctica.] Dokembrii Vostochnoi Antarktidy. Moskva, Nedra, 1965 469 p. (Leningrad. Nauchno-issledovatel'skii institut geologii Arktiki. Trudy, vol. 138)

(MIRA 18:5)

SUDOVIKOV, N.G., doktor geol.-miner. nauk, otv. red.;
[illegible]SLAVINSKIY, D.A., kand. geol.-miner. nauk, red.;
[illegible]LOVA, M.D., kand. geol.-miner. nauk, red.; NEYELOV,
A.N., kand. geo..-miner. nauk, red.; SOKOLOV, Yu.M.,
kand. geol.-miner. nauk, ref.

[Geology and metamorphism of Pre-Cambrian formations in the
U.S.S.R.] Razvitie metamorficheskikh formatsii
v SSSR. Moskva, Nauka, [illegible] (MIRA 18:10)

1. Akademiya nauk SSSR. Geologicheskiy komitet Dokembriya.



SUDOVIKOVA, Ye.N.

Mica from andalusite-corundum rocks of the Semiz-Bugu deposit.
Zap.Vses.min.ob-va. 92 no.2:239-242 '63. (MIRA 16:5)

1. Leningradskiy gornyy institut.
(Semiz-Bugu region--Mica)

L 14074-66 EWT(l)/EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c) JD

ACC NR: AP6003242 SOURCE CODE: UR/0020/65/165/006/1275/1277

AUTHOR: Lazarev, B. G.; Semenenko, Ye. Ye.; Sudovtsov, A. I.; Kuz'menko, V. M. 64 B

ORG: Physicotechnical Institute, Academy of Sciences UkrSSR (Fiziko-tekhnicheskiy institut Akademii nauk SSSR)

21,44,55

TITLE: Maximum critical magnetic fields in superconducting metals 15

SOURCE: AN SSSR. Doklady, v. 165, no. 6, 1965, 1275-1277

TOPIC TAGS: critical magnetic field, indium, tin, thallium, superconductivity, crystal lattice distortion

ABSTRACT: Lattice distortions are used as a criterion for measuring the critical magnetic fields and temperatures in indium, tin and thallium specimens produced by condensation on a glass substrate cooled by liquid helium. The critical magnetic field in the longitudinal direction was determined from the normal electrical resistance of the specimens at this field intensity. The highest critical magnetic fields are observed in freshly precipitated specimens, where the lattice is most strongly distorted. The critical magnetic fields in well annealed specimens is close to that

Card 1/2 UDC: 537.312.62

SUDOVTSOV, A. I.

USSR/Electricity
Superconductivity
Indium

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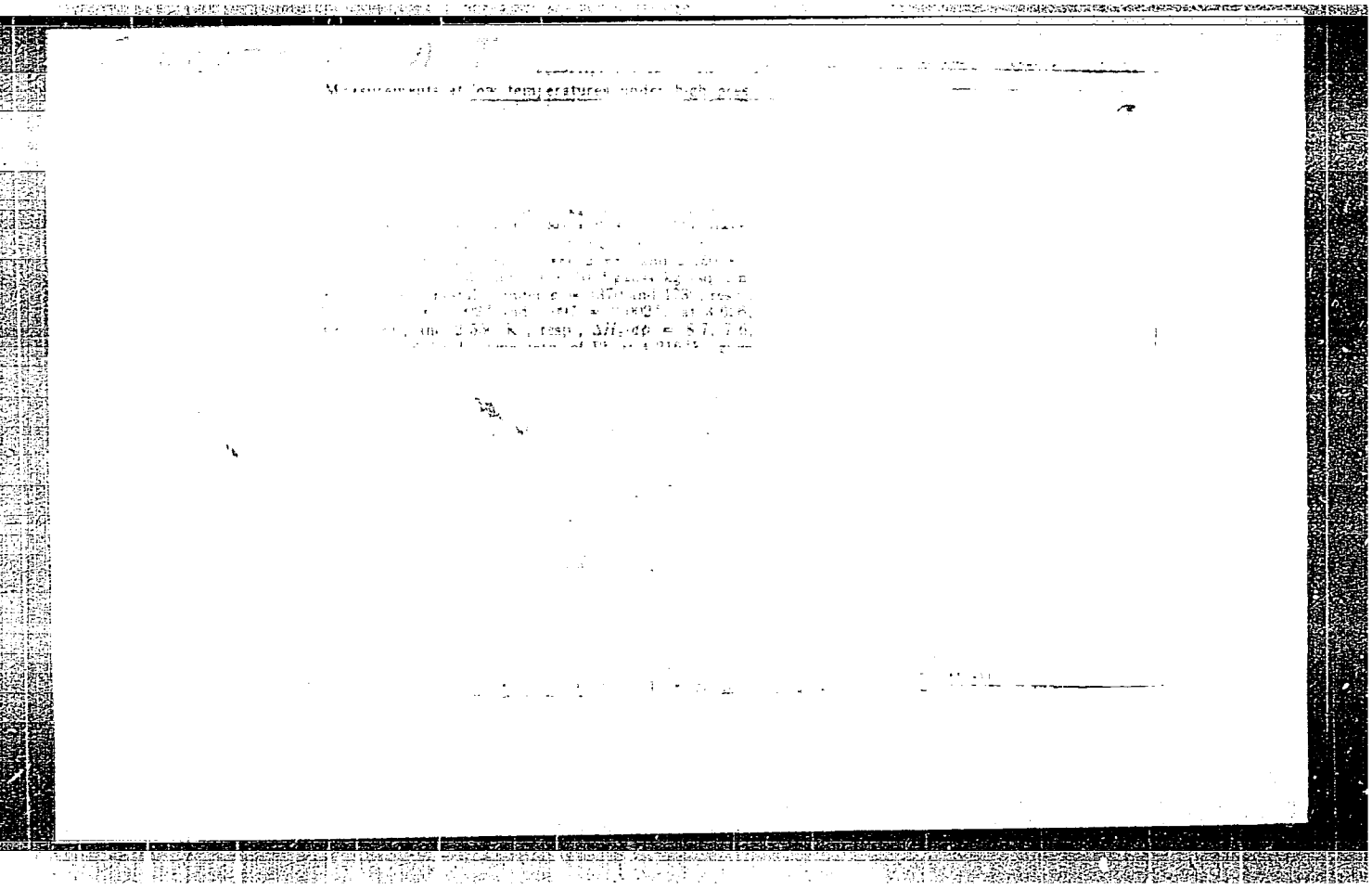
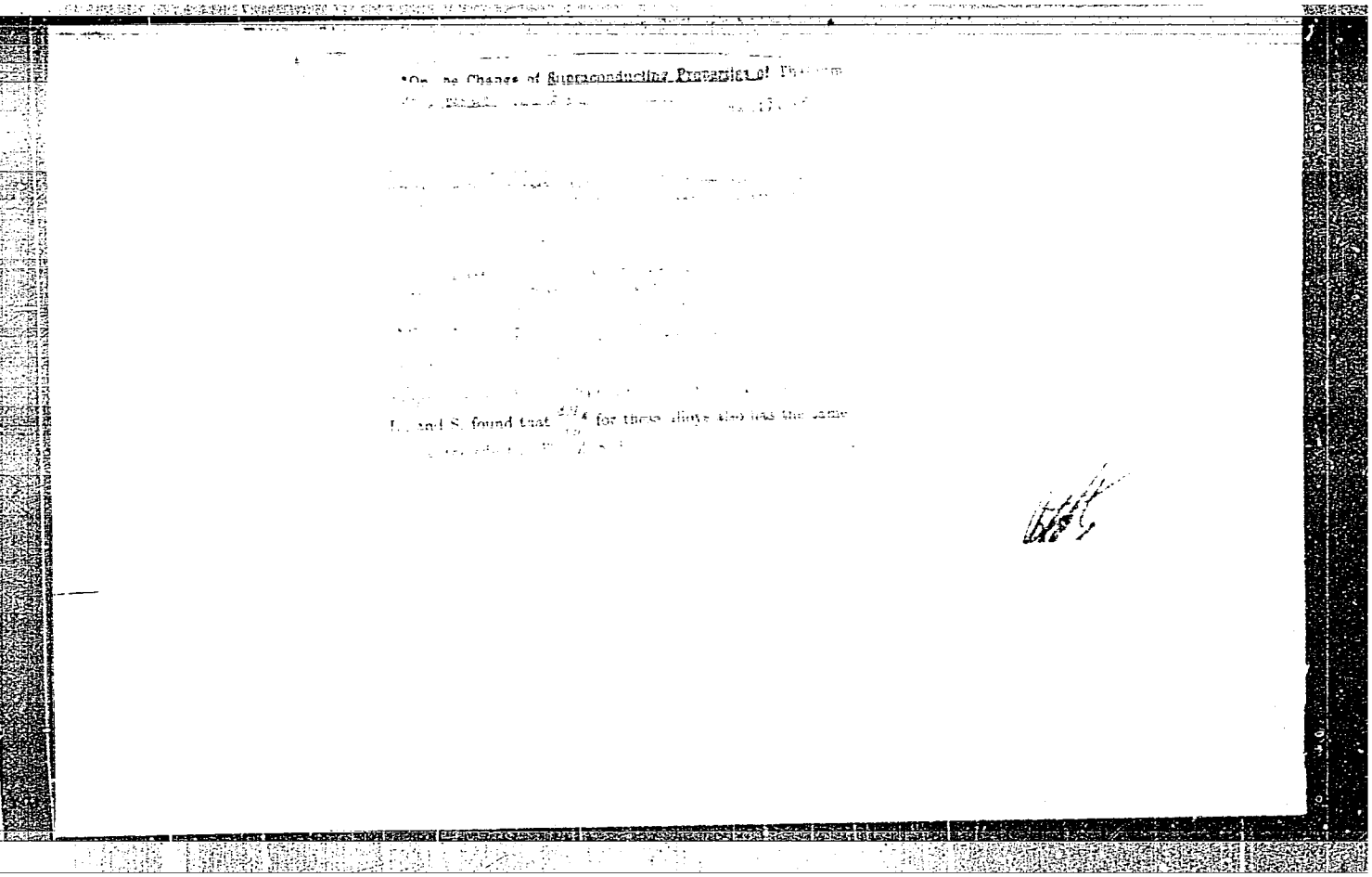
"Measurements Made Under Conditions of High Pressures and Low Temperatures. II. The Superconductivity of Indium and Tin at Pressures of 1370 and 1730 kg/cc Acting Equally From All Sides," L. A. Kan, B. G. Lazarev, A. I. Sudovtsov, Phys-Tech Inst, Acad Sci Ukrainian SSR, 8 pp

"Zhur Eksper i Tecret Fiz" Vol XVIII, No 9

Studies in detail effect of given pressure on superconductivity of polycrystallic indium and monocrystallic tin. Establishes displacement of critical temperature T_k appropriate for given temperatures; for indium, 0.063 and 0.080° and for tin, 0.080 and 0.097°. In this range of pressures T_k and H_k are proportional to pressure. Displacement of critical magnetic field decreases with reduction of temperature. Considers reasons for different conversion intensities of these metals when free of pressure and when subjected to pressure. Shows considerable improvements in measuring methods.

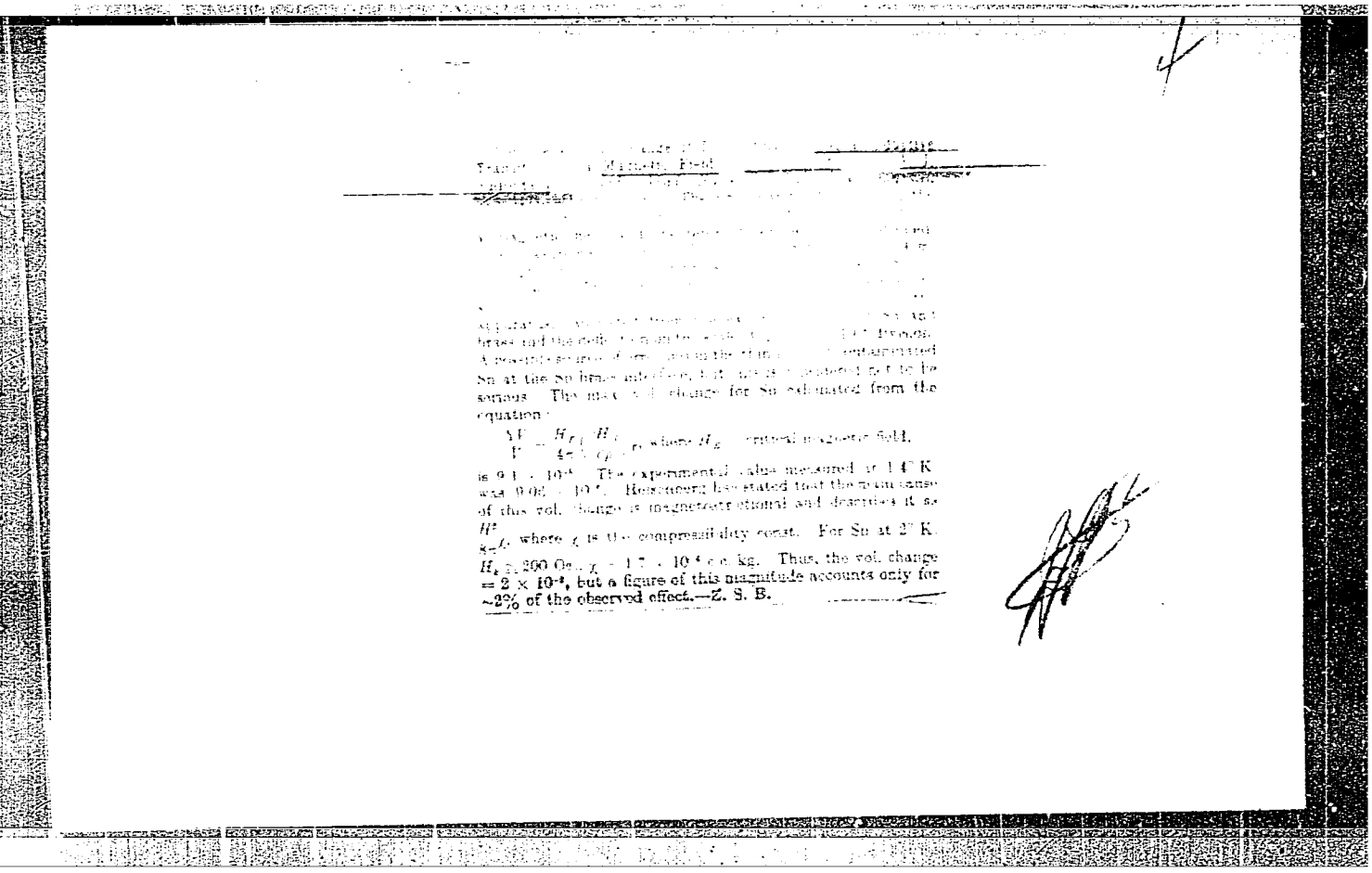
PA 9/49T49





*On the Change of Superconducting Properties of [illegible]

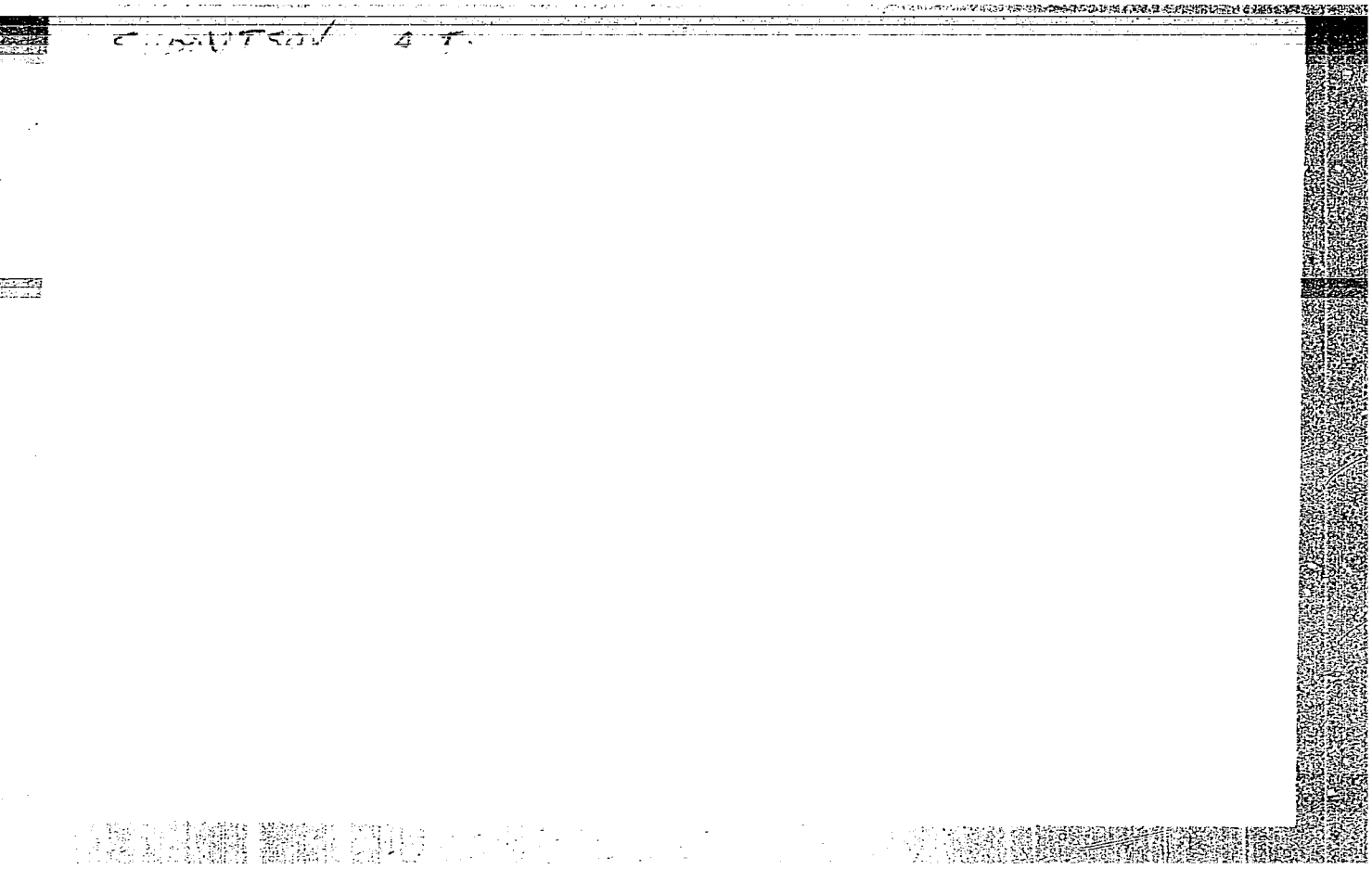
[illegible] found that [illegible] for three alloys the [illegible] was the same



Sn at the Sn lines also, but this is considered not to be serious. The [illegible] change for Sn estimated from the equation

$$\Delta F = \frac{H_{c1}}{4\pi} \Delta H_{c1}$$ where H_{c1} [illegible] field,

is 9.1×10^{-5}. The experimental value measured at 1.4° K was 9.05×10^{-5}. Heinemeyer has stated that the main cause of this vol. change is magnetostrictional and describes it as $H^2 \kappa$, where κ is the compressibility const. For Sn at 2° K, $H_{c1} = 200$ Oe, $\kappa = 1.7 \times 10^{-6}$ c.c. kg. Thus, the vol. change $= 2 \times 10^{-4}$, but a figure of this magnitude accounts only for ~2% of the observed effect.—Z. S. B.



AUTHORS: Lazarev, B. G., Sudovtsov, A. I., Smirnov, A. P. 56-4-42/54

TITLE: On the Supraconductivity of Beryllium Foils Which Condense on a Cold Underlayer (O sverkhprovodimosti plenok berilliya, skondensirovannykh na kholodnoy podlozhke). (Letter to the Editor)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 4, pp. 1059-1060 (USSR)

ABSTRACT: Thin beryllium layers are by vaporizing condensed on the bottom of an evacuateable glass bulb. During the processes of vaporization and condensation the bottom of the glass bulb is dipped into liquid helium. The measurement of the supraconductivity takes place over two electrodes that are melted into the bottom. The thickness of the layer was about 10^{-6} cm. When the thickness increased to more than 10^{-5} cm, the layers came away from the underlayer. Fresh layers show supraconductive properties already at 4,2°K. An accurate determination of the transition point was not yet made, but it is supposed to lie near 8°K.

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Sudnov [illegible] A.I.

AUTHOR: Kuznetsov, V.Ye. SOV-26-58-11/9/49

TITLE: Investigations of the Magnetic Structure of Ferromagnetics (Issledovaniya magnitnoy struktury ferromagnetikov). An All-Union Conference in Krasnoyarsk (Vsesoyuznoye soveshchaniye v Krasnoyarske).

PERIODICAL: Priroda, 1958, Nr 11, pp 53-55 (USSR)

ABSTRACT: In June 1958 an All-Union meeting on the magnetic structure of ferromagnetics was convoked by the Institut fiziki AN SSSR (Institute of Physics of the AS USSR) and the Komissiya po magnetizmu Otdeleniya fiziko-matematicheskikh nauk AN SSSR (Commission for Magnetism of the Department of Physico-Mathematical Sciences of AS USSR) in Krasnoyarsk. The meeting was attended by representatives of scientific institutions of many principal cities of the USSR. A total of 32 papers were read. Ya.S. Shur of the Institut fiziki metallov AN SSSR (Institute of the Physics of Metals, AS USSR) in Sverdlovsk summarized the magnetic structure of ferromagnetics. G.V. Spivak of the Moskovskiy gosudarstvennyy universitet (Moscow State University) told of present and future electron-optical methods of study of the domain structure of ferromagnetics. L.V. Kirenskiy and M.K. Savchenko of the Institute of Physics of the AS USSR in Krasnoyarsk presented new data on the spatial distribution of the domain structure in samples of transformer iron. A.I.

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Investigations of the Magnetic Structure of Ferromagnetics

Sudovtsev and Ye.Ye. Semenenko of the Fiziko-technicheskiy institut AN USSR (Physico-Technical Institute of AS UkrSSR) in Khar'kov read a paper on the influence of the domain structure on the electrical conductivity of very pure iron. G.V. Spivak, V.Ye. Yurasova and Ye.I. Shishkina of Moscow University presented an original method of exposure of magnetic heterogeneity in metal. T.I. Prasova of the Verkh-Isetskiy metallurgicheskiy zavod (Verkh-Isetskiy Metallurgical Plant) told of experimental work carried out in cooperation with V.V. Druzhinin on the application of the method of powder patterns to the study of the magnetic properties of transformer steel. G.P. D'yakov of Moscow University spoke on the calculation of the domain structure in the theory of magnetization and magnetostriction of monocrystals. L.V. Kirpenskiy and I.F. Degtyarev of Krasnoyarsk read a paper on the temperature dependence of the domain structure of crystals of ferrosilicon. V.A. Zaykova and Ya.S. Shur reported on the results of a study of the influence of elastic stresses on the magnetic structure of the crystals of ferrosilicon. V.V. Veter of the Institute of Physics of the AS USSR in Krasnoyarsk reported on his original work conducted together

Investigations of the Magnetic Structure of Ferromagnetics

with L.V. Kirenskiy on the determination of the width of the domain boundary; the method had been suggested by G.S. Krinchik. I.M. Puzey of the Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii, Moskva (Central Scientific Research Institute of Iron Metallurgy, Moscow) communicated the results of studies of the dynamics of the domain structure in a frequency range of up to several mhz. A.I. Drokin, D.A. Laptey, and R.P. Smolin (Krasnoyarsk) presented results of their studies of the temperature magnetic hysteresis on the points of the hysteresis loop. Nickel and iron-nickel alloy samples had been studied for this purpose. I.Ye. Startseva and Ya.S. Shur read a study of the structure of the residual magnetized ferromagnetic by aid of the method of powder patterns, and the change of this structure under the influence of a changing magnetic field. The papers of L.V. Kirenskiy, A.I. Drokin and V.S. Cherkashin dealt with the results of the influence of ultrasonic waves on the magnetic properties of ferromagnetics at various temperatures. Several papers were devoted to further investigations of the

SOV-26-58-11-9/49

Investigations of the Magnetic Structure of Ferromagnetics

Barkhausen effect, the concept of which has been considerably extended by such Soviet researchers as R.V. Telesnin, Ye.P. Dzaganiya, V.F. Ivlev and others. Several papers dealt with transitional magnetic structure and temperature changes. The Physical Institute of the AS USSR in Krasnoyarsk, in 1957 opened the Stolby Game Reservation. The construction site of the Krasnoyarsk Hydroelectric Power Station was visited by the scientists.

1. Magnetostriction--Properties

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SOV/126-7-1-17/28

AUTHORS: Lazarev, B.G., Suiovtsov, A.I. and Smirnov, A.P.

TITLE: Plastic Deformation of Iron During the $\gamma \rightarrow \alpha$ Phase Transition (O plasticheskoy deformatsii zheleza pri fazovom $\gamma \rightarrow \alpha$ perekhode)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1959, Vol 7, Nr 1, pp 122-127 (USSR)

ABSTRACT: In a number of papers (Refs.1-4) irreversible changes were detected in the sizes of iron specimens whilst passing through the $\alpha \rightleftarrows \gamma$ transition temperature range. Lately a paper (Ref.5) has appeared which deals with this particular phenomenon. The authors of the present paper give a few results of their investigation of the residual deformation of iron during transition through the phase change. This phenomenon has been detected dilatometrically. The experiments were carried out with Armco iron, and a few experiments with pure iron(made by the firm Hilger). All measurements were carried out in a vacuum of 10^{-6} -10^{-7} mm Hg. The basic measurements were carried out by means of a simple dilatometer placed in a vacuum (see Fig.1). In

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Plastic Deformation of Iron During the $\gamma \rightarrow \alpha$ Phase Transition

order to check the accuracy of the instruments, dilatometric curves (Fig.2) were plotted at low heating and cooling rates. On plotting the curves under conditions of slow heating and cooling, residual changes in the length of the specimens are not observed. However, a residual change does appear if the experiment is carried out fairly rapidly. It was essential to find which stage of the temperature change is responsible for the phenomenon, heating or cooling. The dilatometric curves in Figs.3 and 4, obtained for a suspended specimen, furnished the answer to this. Both curves were taken on heating (plain circles) and on cooling (points) in the temperature range 800-1000°C. If heating is carried out at any speed and cooling is slow (less than 50°C per minute), the dilatometric curve is reversible (see Fig.3) and no unusual effect appears. Only at a certain cooling rate does the residual elongation of the specimen begin to show (Fig.4). Hence the effect investigated appears in the cooling stage. It is completely absent if the cooling range does not include the transition range

Card 2/5 of one modification to the other. The effect is repeated

α phases were both present, being divided by a boundary line. The boundary was perpendicular to the plate, and a change in current passed through the specimen caused it to be displaced along the specimen (the zone denoted by a dotted line in Fig.7). As a result of numerous current modulations the plate became shorter and at the same time its width increased in those portions at which the boundaries were displaced. The results of tests with a specimen undergoing compression by its own weight, instead of elongation, gave an effect which was opposite in sign but the same in absolute magnitude. Fig.8 illustrates the behaviour of the suspended specimen (upper curve) and a supported specimen (lower curve). Both curves of this figure were obtained at the same cooling rate, which was 90°C per minute. It appears that the fundamental reasons for this phenomenon are to be found in the volume change and in the heat given out during phase transformation. The actual effect depends very strongly on the experimental conditions, i.e. on the shape of the specimens and the conditions of temperature change.

21(0) SOV/53-67-4-7/7

AUTHOR: Chentsov, R.

TITLE: The Fifth All-Union Conference on the Physics of Low Temperatures (5-ye Vsesoyuznoye soveshchaniye po fizike nizkikh temperatur)

PERIODICAL: Uspekhi fizicheskikh nauk, 1959, Vol 67, Nr 4, pp 743-750 (USSR)

ABSTRACT: This Conference took place from October 27 to November 1 at Tbilisi; it was organized by the Otdeleniye fiziko-matematicheskikh nauk Akademii nauk SSSR (Department of Physico-mathematical Sciences of the Academy of Sciences, USSR), the Akademiya nauk Gruzinskoy SSR (Academy of Sciences, Gruzinskaya SSR), and the Tbilisskiy gosudarstvennyy universitet im. Stalina (Tbilisi State University imeni Stalin). The Conference was attended by about 300 specialists from Tbilisi, Moscow, Khar'kov, Kiyev, Leningrad, Sverdlovsk, and other cities as well as by a number of young Chinese scientists at present working in the USSR. About 50 lectures were delivered which were divided according to research fields.

... IV. Magnetism. A. S. Borovik-Romanov (IFP) delivered a report on investigations he carried out of the anisotropy of the weak ferromagnetism in monocrystal samples of the antiferromagnetic $MnCO_3$ (the effect of anisotropy was predicted by the thermodynamical theory developed by Dzyaloshinskiy). In the course of the discussion R. A. Alikhanov (IFP) spoke about neutronographical investigations he carried out of the magnetic structure of $MnCO_3$ and $FeCO_3$ at low temperatures. P. L. Kapitsa stressed the importance of the method based upon Dzyaloshinskiy's theory. N. M. Kreynes (VNIIFTRI), whose lecture was read by A. S. Borovik-Romanov, reported on measurements carried out by him (in the IFP) of the magnetic anisotropy of the antiferromagnetic $CuSO_4$- and $CoSO_4$-monocrystals.

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Ye. A. Turov (IFM AN SSSR, Sverdlovsk) spoke about his theoretical investigations of the magnetizability, the susceptibility, the specific heat, and the resonance frequencies of antiferromagnetics and weak ferromagnetics. A. I. Sudovtsov and Ye. Ya. Semanenko (KhFTI) spoke about measurements of the electric resistance of iron in magnetic fields in a wide temperature range with simultaneous plotting of the magnetization curve. N. V. Vol'kenshteyn, G. V. Fedorov, E. V. Galoshina and M. I. Turchinskaya (IFM AN SSSR) spoke about measurements of magnetization and the Hall effect of polycrystalline samples, nickel and Ni_3Mn at low temperatures. Ye. I. Kondorskiy, V. Bode, U. Gofman and Cheng, Shou-ch'un (MGU) gave a report on susceptibility measurements on nickel and its alloys with copper at low temperatures; T. I. Sanadze (TGU) spoke about the spectrum of the paramagnetic resonance of Tb^{3+} in terbium nitrate at temperatures of liquid hydrogen. M. I. Kaganov and V. M. Tsukernik (KhFTI) dealt with the kinetic phenomena in ferromagnetics at low temperatures and with calculation of relaxation time; A. I. Akhiyezer, V. Bar'yakhtar and S. Peletminskiy (KhFTI) carried out a theoretical investigation of the relaxation of the magnetic moment in ferrodielectrics; Vlasov (IFM AN SSSR) showed that a linearly polarized elastic

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(ultrasonic) wave of a frequency of 10^9 cycles when passing through a ferromagnetic substance in the direction of the magnetic field, is subjected to a turn of the polarization plane of the order of 10^{-3} - 10^{-4} radian/cm oersted. M. I. Kaganov pointed out that in this connection yet another phenomenon may be observed, namely, the resonance absorption of ultrasonics if the wavelength is equal to the radius of the Larmor orbit of the electron. . V. Various Questions. One of the most interesting lectu

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E194/E155

The influence of domain structure ...

was measured with a low-resistance potentiometer type ППГН-1 (PPGN-1). Graphs are given of $\Delta R/R$ as a function of $H(\Delta R = R_h - R)$, where R_h is the resistance value in the demagnetised condition and R the resistance in a magnetic field H at the temperature of measurement. The data obtained permit more accurate use of the method of assessing metal purity by its resistance at very low temperatures. In the case of ferromagnetics it is necessary to allow for the relationship between the resistance, the measuring current and the magnetic field; the purity of a ferromagnetic material can be assessed most accurately with minimum current and a field sufficient for magnetic saturation of the specimen. 7 literature references.

ASSOCIATION: Fiziko-tekhnich. in-t AN USSR, Khar'kov
(Physicotechnical Institute AS Ukr.SSR, Khar'kov)

[Abstractor's note: Complete translation.]

Card 2/2

SUDOVTSOV, A.I.[Sudovtsov, O.I.]

Helium liquifier of the Kharkov Cryogenic Laboratory of the Institute of Technical Physics of the Ukrainian S.S.R. Ukr. fiz. zhur. 5 no.4:560-567 Jl-Ag '60. (MIRA 13:11)

1. Fiziko-tekhnicheskiy institut AN USSR.
(Helium) (Low temperature research)
(Refrigeration and refrigerating machinery)

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B006/B056

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AUTHORS: Lazarev, B. G., Semenenko, Ye. Ye., Sudovtsov, A. I.

TITLE: The Polymorphous Transformations of Lithium, Sodium, and Potassium in Films Condensed on Cold Backings

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 4(10), pp. 1165 - 1166

TEXT: The authors give a report on investigations of low-temperature transformations of alkali metals by the method of low-temperature deformation in a highly undercooled state and on the R(T)-measurement of films. A plastic deformation of lithium and sodium at helium temperatures leads to a practically complete transition into a stable modification; in the deformation diagram such a transition manifests itself in the form of a break. For the purpose of observing the low-temperature polymorphism the method of R(T)-measurement is more suited and more sensitive; (R - electrical resistance of the metal film). The film is produced by allowing a metal to condense on backings having very low temperatures. In this manner, two modifications of bismuth and iron and three of beryllium and

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The Polymorphous Transformations of Lithium, Sodium, and Potassium in Films Condensed on Cold Backings

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B006/B056

gallium were discovered. The writers of the present "Letter to the Editor" employed this method themselves to investigate the low-temperature polymorphism of Li, Na, and K. The films were condensed onto glass backings at 4.2°K, and R(T) was measured during heating of the films up to 200°-300°K. The R(T)-curves have breaks that indicate the existence of three modifications. The R(T)-curve for K is given. The curve for Li from 160° to 170°K shows a sharp break (experiments carried out by plastic deformation furnished a transition temperature of about 143°-167°K). Na has a transition at ~80°K and K at ~55°-78°K. For Li and Na, breaks were still found at 80° and 40°K, respectively, and for K at ~20°K. These temperatures correspond to the transformation temperatures of metals. The experiments proved the existence of polymorphous transitions in Li and Na and, besides, led to the discovery of a low-temperature transition in K. Thus, it is also proved that the temperature of polymorphous transitions in these metals drops with decreasing Debye temperature. There are 1 figure and 9 references: 7 Soviet, 1 US, and 1 German.

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S/056/61/040/001/011/037
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24.2140 (1072, 1055, 1395)

AUTHORS: Lazarev, B. G., Semenenko, Ye. Ye., Sudovtsov, A. I.

TITLE: Modifications of beryllium and iron in films, condensed on a cold backing

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40, no. 1, 1961, 105-108

TEXT: It is well known that some metals, at least bismuth and beryllium, do not become superconductive in massive form down to 10^{-2} °K. In form of thin films condensed at low temperatures - and that at relatively high temperatures (Bi ~6°K, Be ~8°K) - they become, however, superconductive. The superconductivity of beryllium films and their temperature dependence were investigated in order to find out whether the occurrence of new modifications might be responsible for this effect. As e.g. in the case of iron a low-temperature polymorphism is known; also the electrical conductivity of Be films was studied. In this connection, parallel studies were carried out with Cu films which had no low-temperature polymorphism. The films were measured at 10^{-7} mm Hg in a helium cryostat. In the same device,

Card 1/

Modifications of beryllium ...

also the temperature dependence (1.23-300°K) of electrical conductivity was measured; the heating rate of the films was 2°K/min. The beryllium films showed, as had already been found in preliminary investigations (Ref. 4) at ~30°K a polymorphic transition, and at 8-9°K superconductivity. The superconductive phase remains conserved when the film is heated up to 30°K. Within this range (8.5-30°K) the temperature dependence of the electrical resistance was studied; these experiments showed that only when heated to 60°K, the superconductive phase (R(T) = const) vanishes completely. As the nature of the film is known to depend on whether condensation occurred from the solid or from the liquid phase (in the former case the film consists mainly of diatomic molecules, and in the latter an atomic film forms) it was studied to what extent this produces any effect upon superconductive properties. Films were produced by slow evaporation (from solid Be) and by quick evaporation (from liquid Be) and R(T) was studied. The films of the first kind (condensed on N_2-cooled backings) most probably had a second superconductive modification, whose critical temperature was about 6°K and less, which, however, remained conserved up to 130°K. Also heating of the film to room temperature during 360 hr did not change anything in this effect: With cooling, superconductivity again occurred at

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about 5°K. Fig. 4 shows the R(T)-curves of various Be films. The film condensed onto a helium-cooled backing from the solid phase was a mixture from two superconductive modifications. The first had a critical temperature of ~8.4°K (curve 1), remained conserved up to 30°K, and was completely vanished at 60°K; the critical temperature of the other modification was about ~6°K, and with short (1-2 hr) heating to room temperature (curves 3 and 3') this modification remained conserved; it was, however, considerably less stable than in the case of condensation to a nitrogen-cooled backing, but remained superconductive also up to about 130°. The study of an iron film, condensed on a helium-cooled backing showed that at 40°K a polymorphic transition occurs. A copper film produced on the same conditions, however, showed no such transition. The existence of one- or two low-temperature modifications is today known of the following metals: gallium (2), beryllium (2), bismuth (1), iron (1), sodium (1), lithium (1), and potassium (1). There are 6 figures and 9 references: 7 Soviet-bloc.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Institute of Physics and Technology of the Academy of Sciences Ukrainskaya SSR)

S/056/62/042/004/016/037
B152/B102

24.5600
5.4900

AUTHORS: Semenenko, Ye. Ye., Sudovtsov, A. I.

TITLE: Some features of the temperature dependence of the electrical resistance of ferromagnetic metals at low temperatures

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 4, 1962, 1022-1026

TEXT: A term with linear temperature dependence was found in the equation $R = R(T)$ for iron and nickel in the liquid helium temperature range. Since this term decreases when a magnetic field is applied, it can be attributed to the scattering of the conduction electrons from spin waves. At helium temperatures $R_T/R_{0°C} = R_{0°K}/R_{0°C} + AT + BT^2$. $R_{0°K}/R_{0°C}$ is the residual resistance, A is non-zero only with ferromagnetic metals and describes the scattering from spin waves, B describes the electron-electron interaction. The degree of purity of the iron specimen was >99.99%, its diameter was ~0.1 mm, and its length 38 mm. Its residual resistance was $3.9606 \cdot 10^{-3}$. The grain size was approximately equal to the diameter. The terrestrial magnetic field was compensated. The resistance measurements were made with

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S/056/62/042/004/016/037
B152/B102

Some features of the temperature ...

the ППТН-1 (PPTN-1) compensator. Since the measuring current also changes the domains, the specimen was demagnetized after each measurement by a-c of decreasing amplitude. Between 1.23 and 4.2 the temperature dependence of the iron resistance is

$R_T/R_{0°C} = 3.9606 \cdot 10^{-3} + 3.1 \cdot 10^{-6} T + 1.10 \cdot 10^{-6} T^2$. In a field of 850 oe

$R_T/R_{0°C} = 2.6058 \cdot 10^{-3} + 1.90 \cdot 10^{-6} T + 1.65 \cdot 10^{-6} T^2$. The residual resistance decreases, since scattering from the domain boundaries is impossible in the magnetic field. At liquid hydrogen temperatures (14-20°K), $R_T/R_{0°C}$ $= 3.9606 \cdot 10^{-3} + 1.64 \cdot 10^{-6} T^2 + 4.02 \cdot 10^{-11} T^5$. The last term describes the electron scattering from lattice vibrations which was not observed at helium temperatures. The scattering from spin waves, however, is no longer observed. For nickel, at 14-20°K: $R_T/R_{0°C} = 10.0986 \cdot 10^{-3} + 2.88 \cdot 10^{-6} T^2$ $+ 4.85 \cdot 10^{-11} T^5$. The temperature dependence of platinum can be described by a purely quadratic law. Between 14 and 20°K, as in iron and nickel, scattering from lattice vibrations sets in: $R_T/R_{0°C} = 3.6486 \cdot 10^{-3}$ $+ 4.4 \cdot 10^{-6} T^2 + 8.23 \cdot 10^{-10} T^5$. Hence the electrical resistance of nonferromagnetic platinum shows no term dependent on linear temperature. B. G.

Card 2/3

Lazarev, M. I. Kaganov, and V. G. Bar'yakhtar are thanked for the discussion of the results. There are 3 figures. The English-language reference reads as follows: W. I. de Haas, I. H. de Boer, Physica, 1, 609, 1934; G. K. White, S. B. Woods, Phil. Trans. Roy. Soc., A 251, 273, 1959.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of the Academy of Sciences Ukrainskaya SSR)

SUBMITTED: November 28, 1961

Card 3/3

S/056/62/042/006/012/047
B104/B102

AUTHORS: Semenenko, Ye. Ye., Sudovtsov, A. I., Shvets, A. D.

TITLE: Temperature dependence of the electrical resistivity of iron in the region of 0.38 to 4.2 °K

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 6, 1962, 1488 - 1489

TEXT: Temperatures were produced by pumping out He^3 vapor from the experimental apparatus by means of a carbon absorption pump. For a measuring current of 150 ma and with compensated earth field, the residual electrical resistance of the very pure iron specimen is given by $R(0°K)/R(0°C) = 3.9606 \cdot 10^{-3}$; $R(0°K) = 1.2595 \cdot 10^{-3}$ ohm. The voltages were measured to an accuracy of 10^{-8} volt by using a compensation circuit. The temperature was ascertained to an accuracy of 10^{-2} °K from the helium pressure. The temperature dependence of the resistance can be represented by $R = 3.9606 \cdot 10^{-3} + 3.1 \cdot 10^{-6} T + 1.1 \cdot 10^{-6} T^2$. The linear term in R(T) is

Card 1/2

Temperature dependence of the...

explained by an additional scattering of the conduction electrons by the spin waves. There is 1 figure.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of the Academy of Sciences Ukrainskaya SSR)

SUBMITTED: January 30, 1962

Card 2/2

44246

S/056/62/043/006/061/067
B141/B102

24 2140

AUTHORS: Lazarev, B. G., Lazareva, L. S., Sudovstov, A. I., Aliyev, F. Yu.

TITLE: Jump of the heat expansion coefficient of Nb_3Sn for superconducting transition

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 6(12), 1962, 2312-2313

TEXT: For measuring $\Delta V/V$ at T_{cr} ($\approx 18^{\circ}K$), a highly accurate apparatus was designed whose sensitive part is a coil of bimetal strip 55 cm long. One end of this is stationary, and the other can turn when the volume of one metal changes with respect to the other, the torsion corresponding to the quantity to be measured. In this case the coil consisted of niobium coated with Nb_3Sn (0.05 mm). The jump of the expansion coefficient of Nb_3Sn at $1.5 \cdot 10^{-7} (\pm 10\%)$ deg^{-1} was apparently as large as that of tin and lead. The theoretical value, determined thermodynamically, would appear to be higher by three powers of ten than that measured. This indicates that for Nb_3Sn

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and similar superconductors the magnetic field has great depth of penetration. The coefficients of expansion and compression of Nb_3Sn and Nb also were measured in the temperature range 300° to 2°K. The expansion coefficient of Nb_3Sn was found to be only slightly larger than that of Nb, e.g. by $3 \cdot 10^{-6}$ at 300°K and by $2 \cdot 10^{-7}$ at 2-4°K, i.e., the thermal and elastic properties of Nb_3Sn and Nb are very similar. There is 1 figure.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of the Academy of Sciences Ukrainskaya SSR)

SUBMITTED: September 12, 1962

L 17219-63 EWT(l)/EWP(q)/EWT(m)/BDS/EEC(b)-2/ES(s)-2 AFFTC/ASD/ESD-3/
ACCESSION NR: AP3005302 IJP(C) Pt-4 SG/ S/0056/63/045/002/0391/0392
JD/JG/K

AUTHORS: Lazarev, B. G.; Semenenko, Ye. Ye.; Sudovtsov, A. I.

TITLE: Critical magnetic fields of superconducting beryllium films

SOURCE: Zhur. eksper. i teoret. fiz., v. 45, no. 2, 1963, 391-392

TOPIC TAGS: superconductivity, beryllium film, critical magnetic field

ABSTRACT: Preliminary results are reported on the destruction of superconductivity in beryllium films obtained by condensation on a substrate cooled with liquid helium. The film plane was parallel to the magnetic field. The measuring current in the film was perpendicular to the field. The destruction fields were found to be very large, with dH_c/dT close to 33000 Oersted/degree (H_c -- critical magnetic field, T -- temperature). It is tentatively concluded

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L 17219-63
ACCESSION NR: AP3005302

that in the beryllium film the metal is in the maximally disordered state, meaning that the smallest parameter, such as the mean free path of the electrons, is smaller than the film thickness. Orig. art. has 1 figure.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physicotechnical Institute, Academy of Sciences, Ukrainian SSR)

SUBMITTED: 17May63 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: PH NO REF SOV: 007 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 08/26/2000 CIA-RDP86-00513R001653730006-0"

SEMENENKO, Ye.Ye.; SUDOVTSOV, A.I.; VOLKENSHTEYN, N.V.

Temperature variation of the electric resistance of cobalt in the region 1.3° to 4.2°K. Zhur. eksp. i teor. fiz. 45 no.5: 1387-1388 N '63. (MIRA 17:1)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.

[illegible] superconductive [illegible]

[illegible]

TOPIC TAGS: superconductivity, superconductive magnetic support

ABSTRACT: The instrument comprises a cryostat, a test superconductive magnetic support, a measuring system, a vibrator, and a contact device. The [illegible] are placed in a Hertilled cryostat, the measuring [illegible] are at room temperature. [illegible] gap-measurement error is [illegible] with an error of ±15 . A [illegible]

Card 1/2

L [illegible]
ACCESSION NR AP4047484

[illegible] AN [illegible]SSR (Physico-Technical
[illegible]

SUBMITTED 4Nov63 ENCL: 00

SUB CODE: GP NO REF SOV: 000 OTHER: 003

Card 2/2

ACCESSION NR: AP4043622 S/0056/64/047/002/0486/0493

AUTHORS: Semenenko, Ye. Ye.; Sudovtsov, A. I.

TITLE: Effect of domain structure on the electric resistivity of iron, nickel, and cobalt at low temperatures

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 486-493

TOPIC TAGS: electric resistivity, low temperature phenomenon, iron, nickel, cobalt, galvanomagnetic effect, domain structure, ferromagnetism

ABSTRACT: In view of the decrease in the electric resistivity of very pure iron when magnetized at low temperatures, previously observed by the authors (ZhETF, v. 35, 305, 1958), it would be expected that ferromagnetic metals experience an appreciable reduction in electric resistivity at low temperatures when magnetized to saturation. To check on this hypothesis, the authors measured the de-

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ACCESSION NR: AP4043622

tered by the domain boundaries. An allowance for this effect is important in the determination of the purity of ferromagnetic materials from their residual electric resistance. "The authors thank B. G. Lazarev, M. I. Kaganov, and V. G. Bar'yakhtar for a discussion of the results and for interest in the work." Orig. art. has: 5 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk UkrSSR (Physicotechnical Institute, Academy of Sciences, UkrSSR)

SUBMITTED: 29Feb64 ENCL: 00

SUB CODE: MM, EM NR REF SOV: 005 OTHER: 007

ACCESSION NR: AP5001620 S/0056/64/047/006/2022/2026

AUTHOR: Aliyev, F. Yu.; Lazarev, B. G.; Sudovtsov, A. I.

TITLE: Experimental determination of the electronic component of the coefficient of thermal expansion of iron

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 6, 1964, 2022-2026

TOPIC TAGS: iron, thermal expansion coefficient, electronic component, low temperature research

ABSTRACT: Results are presented of an investigation of the thermal expansion of [illegible] temperatures, using an improved version of an earlier [illegible]. Until recently

Card 1/2

ACCESSION NR: AP5001820

...temperature changes at constant pressure (thermal expansion) and for ...compressibility). The ...surements were made ... The value ... The Grüneisen ...temperature ...ume, and the ...

...Physicotech...

...

OTHER: 003

NR REF SOV: 009

Card 2/2

KOLODEYEV, I.D.; SUDOVTSOV, A.I.

Apparatus for measuring the electromagnetic forces in superconducting magnetic supports. Prib. i tekh. eksp. 9 no.5:182-184 S-O '64. (MIRA 17:12)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.

SEMENENKO, Ye.Ye.; SUDOVTSEV, A.I.

Effect of the domain structure on the electric resistance of iron, nickel and cobalt at low temperatures. Zhur. eksp. i teor. fiz. 47 no.2:486-493 Ag '64. (MIRA 17:10)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.

L 46705-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG/GD

ACC NR: AT6020708 (N) SOURCE CODE: UR/0000/65/000/000/0097/0109

AUTHOR: Semenenko, Ye. Ye.; Sudovtsov, A. I.

ORG: none

TITLE: Polymorphism of metals in films obtained by low-temperature condensation

SOURCE: AN UkrSSR. Fizika metallicheskikh plenok (Physics of metal films). Kiev, Naukova dumka, 1965, 97-109

TOPIC TAGS: metal film, low temperature research, phase transition, superconductivity, temperature dependence, resistivity

ABSTRACT: The authors report results of an investigation of low-temperature polymorphism of metals by low-temperature deformation of the metal in a strongly supercooled state. The metals tested were Cu, Li, Na, K, Be, Bi, and Fe. The metal films were condensed under various conditions on a surface cooled to 4.2 - 80K, and their characteristics were measured with specially developed apparatus (Fig. 1). The measurements consisted of determining the temperature dependence of the resistivity, the time variation of the resistivity after condensation, and determination of the point of destruction of superconductivity. The tests showed that metal films deposited on very cold substrates have a very highly distorted structure. In some cases the distortion is sufficient to produce a second modification of the metal. The phase-transition temperatures coincide with polymorphic-transformation temperatures obtained by other methods. In some cases (Be, Bi), the second modification exhibits supercon-

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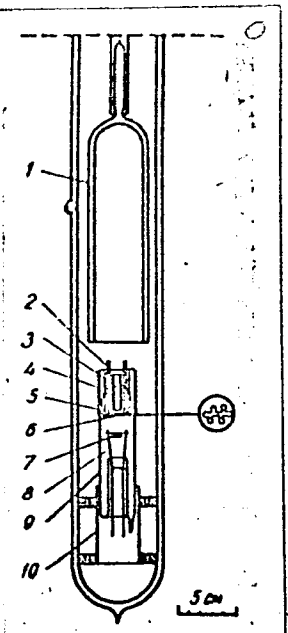
ACC NR: AT6020708

Fig. 1. Instrument for production of films and for measurement of their electric conductivity: 1 - Cap in form of Dewar, 2 - resistance-measurement leads, 3 - resistance thermometer, 4 - heater, 5 - glass substrate, 6 - screen, 7 - metal to be evaporated, 8 - evaporator, 9 - glass vial, 10 - mount for centering vial.



ductivity, although the basic modification does not. It is deduced that low-temperature condensation of the films leads to a metal with the closest-packing structure, of the same type as obtained under high pressure. Orig. art. has: 11 figures.

SUB CODE: 20/ SUBM DATE: 30Oct64/ ORIG REF: 010/ OTH REF: 006

Card 2/2

L 3991B-66 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/GD

ACC NR: AT6015895 (N) SOURCE CODE: UR/0000/65/000/000/0018/0022

AUTHOR: Lazarev, B. G.; Semenenko, Ye. Ye.; Sudovtsov, A. I.; Kuz'menko, V. M.

ORG: Physicotechnical Institute, AN UkrSSR (Fiziko-tekhnicheskiy institut AN UkrSSR)

TITLE: Effect of the degree of ordering on the superconducting properties of metals

SOURCE: AN UkrSSR. Issledovaniye energeticheskogo spektra elektronov v metallakh (Study of the energy spectrum of electrons in metals). Kiev, Izd-vo Naukova dumka, 1965, 18-22

TOPIC TAGS: thallium, tin, superconductivity, temperature dependence, magnetic field measurement, resistivity

ABSTRACT: The dependence of temperature in critical magnetic fields (H_k) and resistivities was studied in 100 Å condensed films of Tl and Sn. Amorphous structures in the condensed films representing extreme departures from crystalline equilibrium were restored by annealing, whereby the effect of lattice order on free electron conductivity was exhibited. As-condensed films had the largest values of H_k when measured as a function of temperature from 4.2 to 1.5°K. Specimens annealed between 25 and 250°K had decreasing values of H_k. All curves obeyed the relation

$$H_K = H_{K_0}\left[1 - \left(\frac{T}{T_K}\right)^2\right],$$

Card 1/2

AUTHORS: Sudovtsov, A. M., Semenenko, Ye. Ye. SOV/56-35-1-56/59

TITLE: The Influence of the Domain Structure on the Electric Resistance of Iron at Low Temperatures (Vliyaniye domennoy struktury na elektrosoprotivleniye zheleza pri nizkikh temperaturakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 35, Nr 1, pp. 305 - 307 (USSR)

ABSTRACT: The authors measured the electric resistance of iron as a function of the longitudinal and of the transverse magnetic fields for the temperature interval between room temperature and that of liquid helium. The magnetization temperatures were obtained for the same temperatures. A sample of very pure iron was used for these investigations. It was 38 mm long and its transverse dimensions amounted to 0,1 mm; the grain dimensions are approximately equal to the diameter of the sample. The results of the measurements are given in 2 figures. The variation of the relative electric resistance $\Delta R/R$ is plotted against the external field. There is $\Delta R = R_H - R$ where R denotes the electric resistance

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effect which prevails in strong fields. The authors observed an influence of the measuring current on the electrical resistance. This resistance grew 20% when the measuring current was increased from 0,1 to 1000 mA. The authors thank B.G.Lazarev, S.V.Vonsovskiy, and M.I. Kaganov for the discussion of results and for their interest in this paper. There are 2 figures and 8 references, 4 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR (Physico-technical Institute of the AS Ukrainskaya SSR)

SUBMITTED: April 21, 1958

Helium liquefier...

the T-S diagram of I.L. Zel'manov (Ref. 8: Termodinamicheskiye svoystva heliya pri nizkikh temperaturakh, ZhETF, 14, 481, 1944; 14, 489, 1944). The working pressure of 30 atm is optimal (as follows from the T-S diagram of Ref. 8) for a hydrogen-bath temperature of 14.5°K. The principal new feature of the liquefier consists in heat-exchangers in which a counter-flow of helium or of low-pressure hydrogen flows past the tubes with high-pressure helium. This ensures a sufficiently low pressure in the helium receiver and in the hydrogen bath even if the operating conditions of the liquefier are upset. Thereby, the servicing of the liquefier is facilitated and its efficiency increased. The design of the counter-flow heat-exchangers necessitates a division of the high-pressure helium flow into two parallel flows in the heat-exchangers I and II. Such a division simplifies the design of the heat-exchanger and provides for better temperature regulation. Fig. 1 shows the basic design of the liquefier. The liquefier consists of 2 parts: the outer part which is a Dewar mainly designed for heat insulation, and the heat-exchanger unit. The latter unit can be easily removed from

Card 2/4

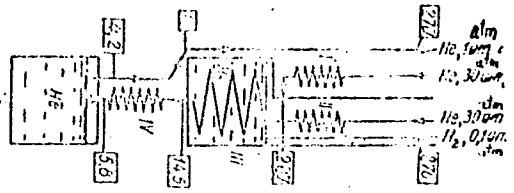
27954 S/185/60/005/004/014/021
Helium liquefier... D274/D306

1950; H. Kammerlingh-Onnes, Comm. Leiden, no. 158; Proc. Roy. Acad. Amsterdam, 29, 1176, 1956.

ASSOCIATION: Fizyko-tekhnichnyy instytut AN USSR (Physicotechnical Institute AS UkrSSR)

SUBMITTED: November 19, 1959

Fig. 1: Basic design of liquefier



Card 4/4

SUDRA, Andrzej, mgr., inz.

A new standard regarding the quality control of textile fabrics and the conditions for its application. Normalizacja 29 no.10:471-474 '61.

(Poland--Textile fabrics)

SUDRA, V., prof.

Maintenance and repair of motor vehicles in Poland. Avt.transp. 38 no.11:60-62 N '60. (MIRA 13:11)
(Poland--Motor vehicles--Maintenance and repair)

SUDRA, W.

"The Cooperation of the Automobile Industry with the Automobile Service Agencies" p. 98 (Technika Motoryzacina, Vol. 3, No. 4, April, 1953, Warszawa)

SO: Monthly List of East European Accessions, Vol. 3, No. 2, Library of Congress, February, 1954, Uncl.

SUDRA, Wiktor, prof.

Training of engineers for the background of the motorization in the U.S.S.R.
Przegl techn no.37:3-4 14 S '60

SUDRA, Wiktor, prof.

Ways of developing scientific research work for the needs of motorization. Przegl techn 84 no.30:1, 4 28 Jl '63.

SUDRAB, V.

Improve the practice of applying new wage systems. Sots. trud 7 no.5:70-74 My '62. (MIRA 15:5)
(Karaganda Province--Wage payment systems)

SUDRAB, V.A.

Potential for increasing labor productivity in nonferrous metallurgy. Review of the book by I.M. Gratsershteyn and G.A. Goncharov. Tsvet. met. 38 no.6:92 Je '65. (MIRA 18:10)

KUDNITSKIY, Mikhail L'vovich; SUDRAB, Viktor Aleksandrovich; SUROVA, V.A., red. izd-va; MINSKER, L.I., tekhn. red.; SHKLYAR, S.Ya., tekhn. red.

[Guide for workers occupied in the dressing and recovery of nonferrous metals and diamonds]Pamiatka dlia rabochikh, zaniatykh na obogashchenii i izvlechenii tsvetnykh metallov i almazov. Moskva, Gosgortekhizdat, 1962. 154 p. (MIRA 15:10)

(Nonferrous metals--Metallurgy) (Diamond cutting)

RUDNITSKIY, Mikhail L'vovich; SUDRAB, Viktor Aleksandrovich; SUROVA, V.A., red. izd-va; MINSKER, L.I., tekhn. red.

[Handbook for miners engaged in underground mining of nonferrous ores, diamonds, and mica]Pamiatka dlia rabochikh, zaniatykh na podzemnykh rabotakh po dobyche rud tsvetnykh metallov, almazov i sliudy. Moskva, Gosgortekhizdat, 1962. 153 p. (MIRA 15:10)

(Mine management)

KUDNITSKIY, Mikhail L'vovich; SUDNAB, Viktor Aleksandrovich; SUROVA, V.A., red. izd-va; MINSKER, L.I., tekhn. red.; LOMILINA, L.N., tekhn. red.

[Handbook for miners engaged in strip mining of nonferrous metal ores, diamonds, and mica] Pamiatka dlia rabochikh, zaniatykh na dobyche rud tsvetnykh metallov, almazov i sliudy otkrytym sposobom. Moskva, Gosgortekhizdat, 1962. 170 p. (MIRA 15:10)

(Mine management)

SUDRABKALNS, J.

Topics about people's friendship in Soviet Latvian literature. p. 31. PADOMJU LATVIJAS KOMUNISTS, Riga. Vol. 11, no. 5, May 1956.

SOURCE: East European Acession List (EEAL) Library of Congress Vol. 5, no. 8, August 1956.

KIRKHENSHTEYN, A., akademik, Geroy Sotsialisticheskogo Truda; KAL'NIN'SH, A. [Kalniņš, A.], akademik; STRADIN'SH, P. [Stradiņš, P.], akademik; SUDRABKALN, Yan [Sudrabkalns, Jānis], narodnyy poet Latviyskoy SSR MELBARDIS, K., khudozhnik; LAPIN'SH, A. [Lapiņš, A.], narodnyy khudozhnik Latviyskoy SSR; YUROVSKIY, Yu., narodnyy artist SSSR; AVOTS, A., fotolyubitel'; VARDAUNIS, E., khudozhnik, zasluzhennyy deyatel' iskusstv Latviyskoy SSR; GAYLIS, V., kinooperator; RIDZENIYEKS, V., fotograf; KALNYN'SH, E. [Kalnins, E.]; LOGANSON, R. [Iohanson, R.], stareyshiy master khudozhestvennoy fotografii; RIEKSTS, Ya. [Rieksts, J.], fotograf; LERKH, Yu.; FEDOSEYEV, B., fotograf; REYKHMAN, E., zasluzhennyy deyatel' kul'tury Latviyskoy SSR; GROBMAN, Ya. [Grobman, J.], fotograf; OZOLS, Ya. [Ozols, J.], fotograf; TIKNUS, B., fotograf; FADEYEV, Ye., fotograf; RAKE, I., fotograf; HERZTIS, A., fotograf; RAKE, K., fotograf; UPIT, V., fotograf; SHADKHAN, M., fotolyubitel'; RITERS, G., fotolyubitel'.

Organize a society of Soviet photographers! Sov.foto 18 no.4:77 Ap '58. (MIRA 11:6)

1.Rizhskaya kinostudiya (for Gaylis, Fedoseyev).3.AN Latviyskoy SSR (for Ridzenieks). 4.Chlen-korrespondent Akademii khudozhestv SSSR (for Kal'nynsh, E). 5.Zhurnal "Rigas foto" (for Rieksts, Gorman, Ozols). 6.Latviyskoye teatral'noye obshchestvo (for Lerkh). 7.Direktor Doma narodnogo tvorchestva imeni E. Melngaylisa (for Reykhman). 8.Predsedatel' Tvorcheskogo soveta (for Grobman). 9.Chlen Tvorcheskogo soveta (for Ozols). 10.Gazeta "TSinya" (for Tiknus). 11.Fotokhronika Latviyskogo telegrafnogo agentstva (for Fadeyev). 12.Institut Latgiproprom (for Rake, I.).

(Photography--Societies)

SOKOLOV, G.; SUDRAVSKIY, D.; PETROPAVLOVSKIY, V.

Focusing system with magnetic centering. Radio no.12:42 D '55.
(Television--Picture tubes) (MLRA 9:4)

AID P - 4453

Subject : USSR/Radio

Card 1/1 Pub. 89 - 20/20

Author : Klyukachev, V. and D. Sudravskiy

Title : Magnetic leakage in television tuning

Periodical : Radio, 5, 55, My 1956

Abstract : Causes of magnetic dispersion in the transformer are explained. Recommendations are made to amateur television receivers builders on the placement of the transformer and the choke-filter to eliminate horizontal bands. Two diagrams.

Institution : None

Submitted : No date

107-57-3-38/64

AUTHOR: Sokolov, G., and Sudravskiy, D.

TITLE: A Deflecting System for an Amateur TV Set
(Otklonyayushchaya sistema dlya lyubitel'skogo televizora)

PERIODICAL: Radio, 1957, Nr 3, pp 35-37 (USSR)

ABSTRACT: A simple deflecting system, suitable for Soviet kinescopes 35LK-2B, 43LK-2B, and 53LK-2B, is described in the article. The system is claimed to guarantee geometrical distortion under 2% and a negligible line ripple. Horizontal and vertical deflecting coils are mounted on a pressboard cylinder which is slipped over the neck of the kinescope. For purposes of adjustment, the cylinder can be moved around the axis of the kinescope. A detailed drawing of the coil-bearing cylinder is given. A coil-form drawing and coil-winding data are presented. By connecting pairs of coils in series or in parallel, the deflecting system can be used with various kinescopes and sweep generators. Connected in series, the horizontal deflecting coils have inductance of 37-40 mH and resistance of 50 ohms; the vertical deflecting coils have inductance of 50-55 mH and resistance of 40 ohms. Remedies against rhombic, trapezoidal,

Card 1/2

SUDRAVSKIY, D. D.

В. С. [illegible]

Современное состояние и перспективы применения телевидения в промышленности, науке и технике в СССР

Н. Е. [illegible]

Разработка унифицированного телевизионного и звукового оборудования различного назначения для телевещания

Р. Е. Быков,
С. Б. Гуревич

Процессы накопления и коммутации в видиконе в переходном режиме

Р. Е. Быков,
С. Б. Гуревич

О влиянии апертуры луча на структуру потенциального рельефа в видиконе.

11 июня

(с 10 до 16 часов)

В. А. [illegible]

Студийная камера цветного телевидения.

В. Н. [illegible]

Аппаратура цветного телевидения для Московского телецентра

В. Н. [illegible]

Совместимость систем цветного телевидения с одной поднесущей частотой, выполненных для стандартов ОИР и МККР

Г. Н. [illegible]

Преобразование стандартов цветного телевидения

11 июня

(с 18 до 22 часов)

О. В. [illegible]

Общий комплекс измерений в междугородных каналах цветного телевидения

Л. И. [illegible],
Д. Д. Судравский

Проекционные устройства цветного телевидения

А. И. [illegible]

Выбор равносигнального белого цвета для системы цветного и черно-белого телевидения

А. Г. [illegible],
В. М. [illegible]

Коррекция искажений цветов в цветном телевизионном изображении при передаче кинофильмов

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORIE), Moscow, 8-12 June. 1959

SOKOLOV, G., inzh.; SUDRAVSKIY, D., inzh.

"TSvet-1" amateur television receiver. Radio no.10:41-44 O '61. (MIRA 14:10)

(Color television)

SOKOLOV, G., inzh.; SUDRAVSKIY, D., inzh.

"TSvet-1" television receiver. Radio no.12:25-32 D '61.
(MIRA 14:12)

(Color television)

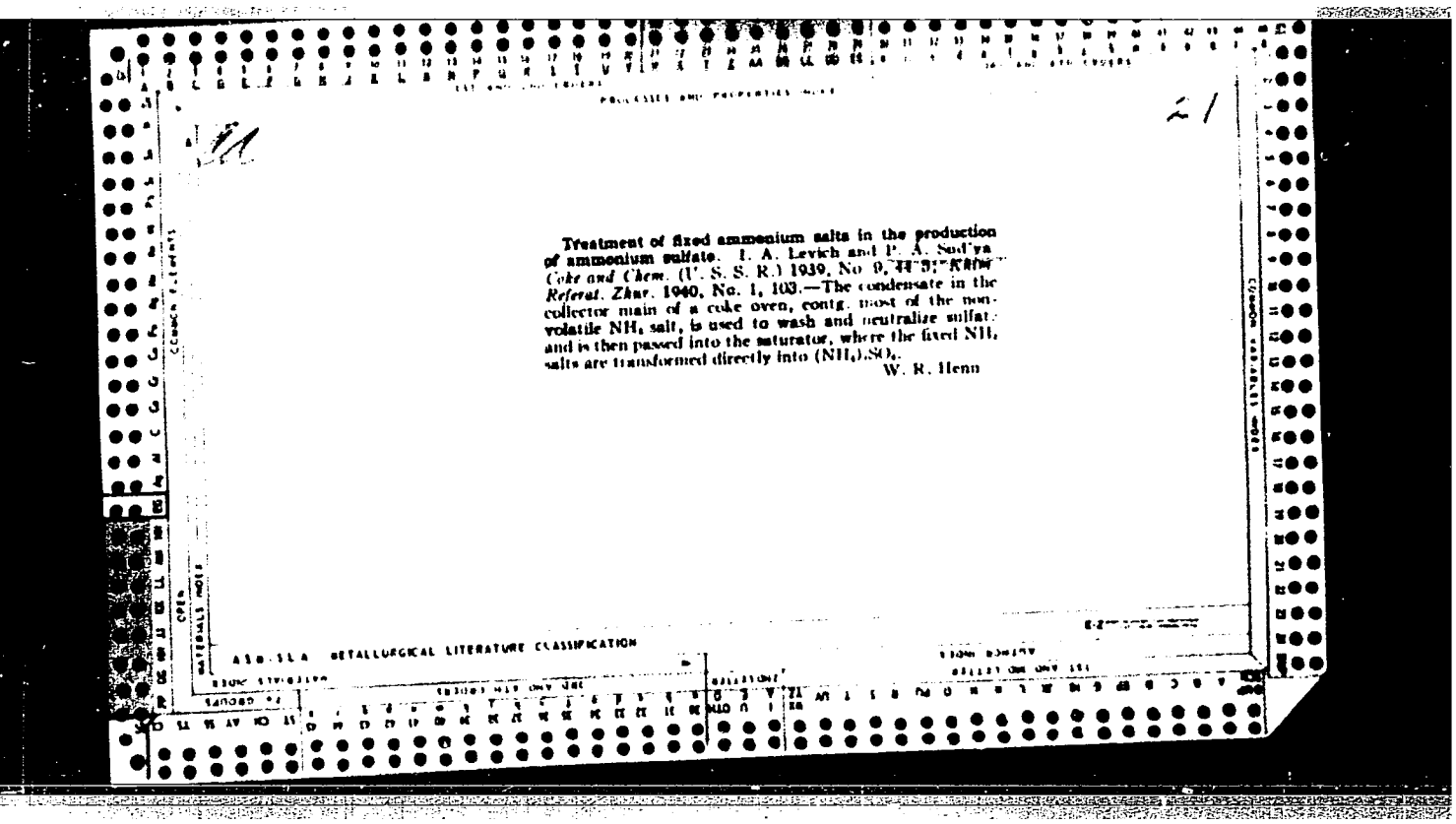
SOKOLOV, Georgiy Nikolayevich; SUDRAVSKIY, Dmitriy Dmitriyevich; KUZ'MINOV, A.I., red.; LARIONOV, G.Ye., tekhn. red.

["TSvet-2" color television receiver] TSvetnoi liubitel'skii televizor "TSvet-2." Moskva, Gosenergoizdat, 1963. 39 p. (Massovaia radiobiblioteka, no.469) (MIRA 17:4)

BAROSU, Mircea, chimist diplomat; SUDRESAN, Sever, ing.; NASTASE, Constanta, ing.

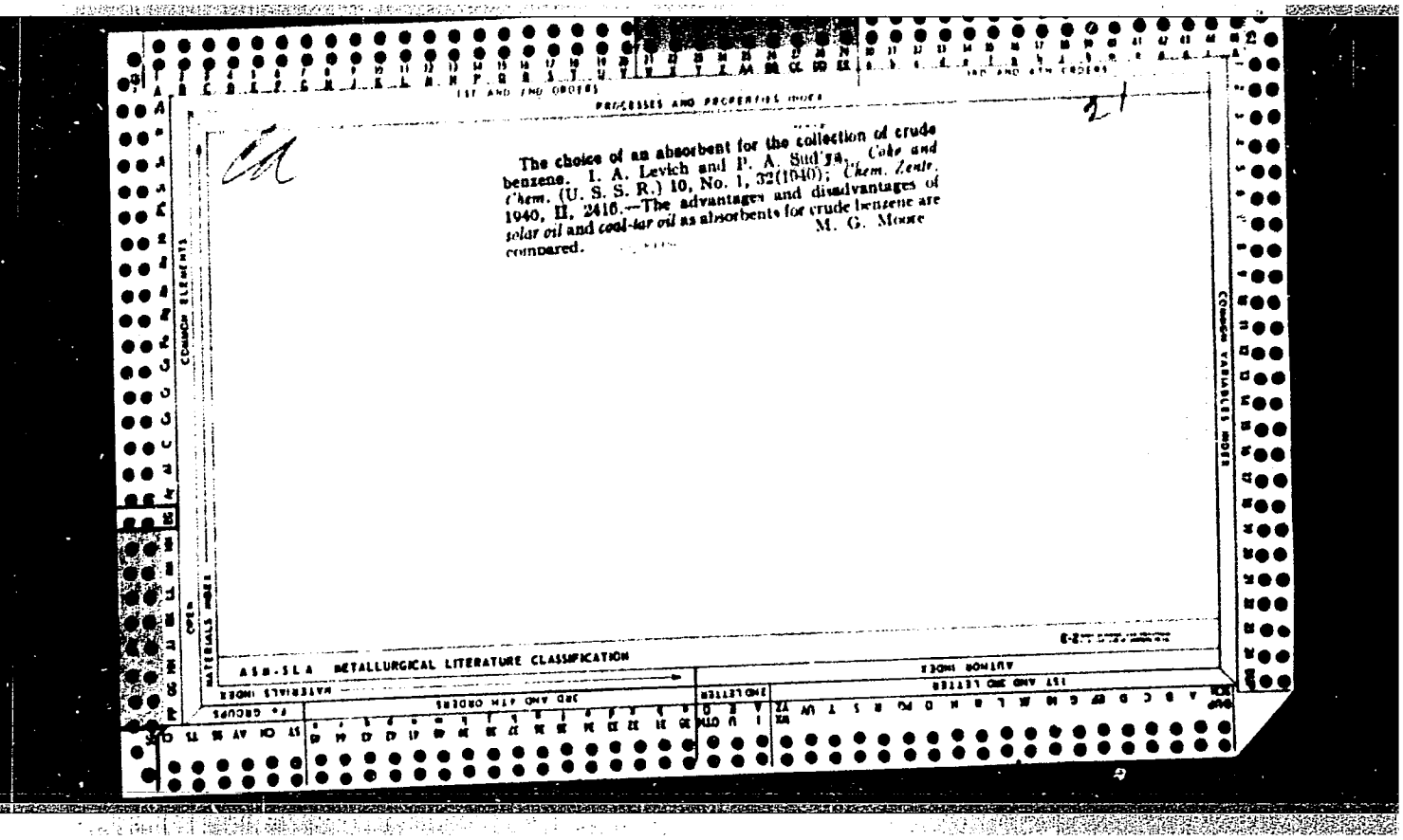
Galvanic batteries of the highest quality manufactured, using the most active manganese dioxide. Electrotehnica 11 no.4: 141-149 Ap '63.

1. Sef al laboratorului de electrochimie la Institutul de Cercetari Electrotehnice (for Barosu). 2. Sef al sectiei de elemente galvanice la Intreprinderea Industriala de Stat Electro-Banat (for Sudresan). 3. Cercetatoare la laboratorul de electrochimie Institutul de Cercetari Electrotehnice (for Nastase).



Treatment of fixed ammonium salts in the production of ammonium sulfate. I. A. Levich and P. A. Sud'ya. *Coke and Chem.* (U. S. S. R.) 1939, No 9, [illegible]. *Referat. Zhur.* 1940, No. 1, 103.—The condensate in the collector main of a coke oven, contg. most of the non-volatile NH_4 salt, is used to wash and neutralize sulfate and is then passed into the saturator, where the fixed NH_4 salts are transformed directly into $(NH_4)_2SO_4$.

W. R. Henn



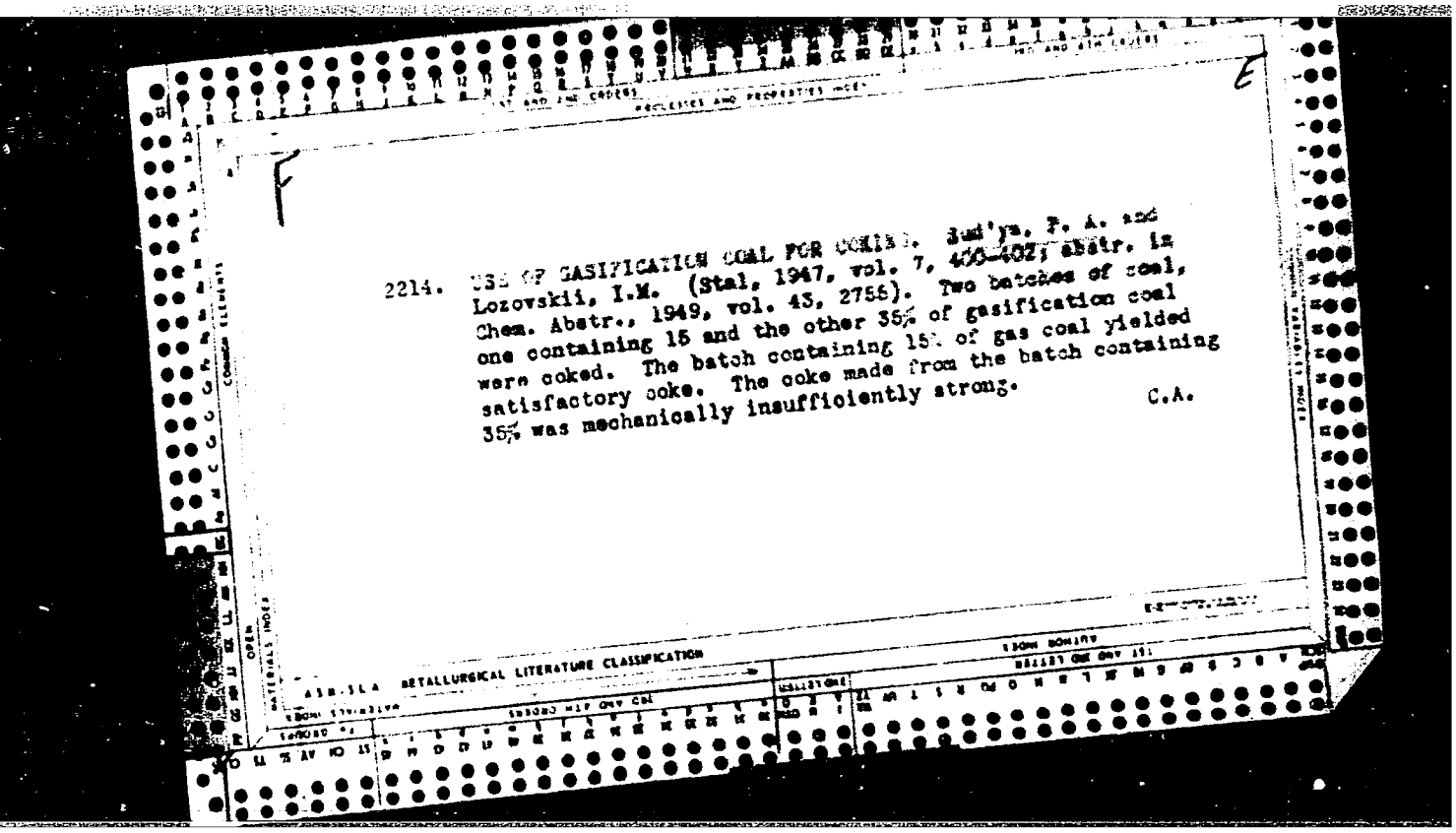
The choice of an absorbent for the collection of crude benzene. I. A. Levich and P. A. Sid'ya. *Coke and Chem.* (U. S. S. R.) 10, No. 1, 32(1940); *Chem. Zentr.*, 1940, II, 2416.—The advantages and disadvantages of *solar oil* and *coal-tar oil* as absorbents for crude benzene are compared.

M. G. Moore

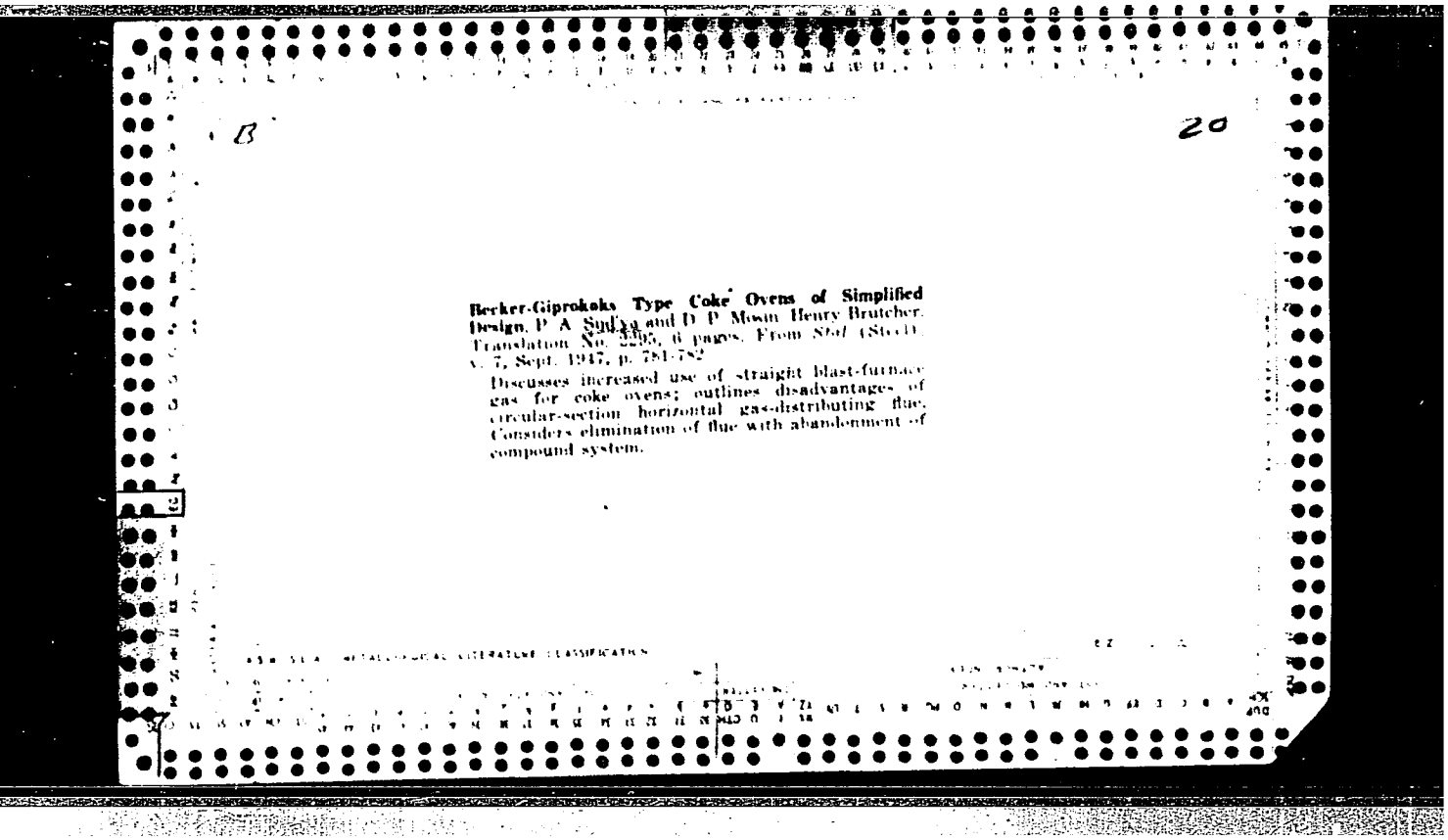
SUD'YA, P.A., Inzhener.

Comments on N.S.Griaznova's article "Improving charge composition in eastern coke processing plants." Stal' 7 no.3:269 '47. (MLRA 9:1)

1.Magnitogorskiy metallurgicheskiy kombinat.
(Magnitogorsk--Coke industry)



2214. USE OF GASIFICATION COAL FOR COKING. Sud'ya, P. A. and Lozovskii, I.M. (Stal, 1947, vol. 7, 400-402; abstr. in Chem. Abstr., 1949, vol. 43, 2755). Two batches of coal, one containing 15 and the other 35% of gasification coal were coked. The batch containing 15% of gas coal yielded satisfactory coke. The coke made from the batch containing 35% was mechanically insufficiently strong. C.A.



B

20

Berker-Giprokoks Type Coke Ovens of Simplified Design. P A Sudya and D P Mosin. Henry Brutcher. Translation No. 2295, 6 pages. From *Stal'* (Steel), v. 7, Sept. 1947, p. 781-782

Discusses increased use of straight blast-furnace gas for coke ovens; outlines disadvantages of circular-section horizontal gas-distributing flue. Considers elimination of flue with abandonment of compound system.

SUD'YA, P. A.

PA 18T3o

USSR/Metallurgy
Coke

May 1947

"Utilization of Gas Coal for Making Coke," P. A. Sud'ya and I. M. Lozovskiy (MMK and VUKHIN) 3 pp

"Stal'" Vol VII, No 5

Introduction of 15 percent of gas coal in the first block of furnaces at the Magnitogorsk Metallurgical Factory did not lower the quality of the coke. Increase up to 35 percent of gas coal gave coke with noticeable lowering of mechanical stability.

18T36

USSR/Engineering
Furnaces, Coke
Furnaces, Blast

Sep 1947

"Coke Furnaces Using the Bekker-Hyprocoke System Without a Gas Conduit Zone," P. A. Sud'ya, D. P. Mosin, Engrs, Magnitogorsk Combine, 1 p

"Stal'" No 9

The change, in furnaces with two-time heating, from coke to blast furnace gas has greatly simplified and cheapened the construction of furnaces. Also in matters relating to the dependable balance of blast furnace gas it is possible to eliminate its weakest point, the gas conduit zone, and thus increase the operation period of the furnaces. 24T34

11,41. INCREASING OUTPUT OF COKE OVENS. (UVELICHENIE ZAGRUZKI KOKSOVYKH PECHEI). Sudya, P.A. (Moscow: Metallurgizdat, 1948, 52pp.; title in Chem. Abstr., 1953, vol. 47, 9597).

SUD'YA, P. A.

"Effect of Karaganda Coal on the Quality of Metallurgical Coke", Stal', No. 3, 1948.
Engr., Magnitogorsk Combine. -c1948-.

S/130/62/000/001/003/004
A006/A101

AUTHORS: Leont'yev, S.A., Senior Master, Sud'ya, V.P. Chief of Shift

TITLE: Experiences in assimilating the large strip rolling mill 2500

PERIODICAL: Metallurg, no. 1, 1962, 27 - 30

TEXT: Information is given on the operation of rolling mill 2500 intended for hot rolling of 115-250 mm thick, 1,000-1,600 mm wide slabs into 1.5-10 mm thick and up to 2,350 mm wide sheets. Advantages and deficiencies of the mill are described. Among the advantages are: fuelling of the 5 continuous preheating furnaces with natural gas; the use of an evaporation cooling system; the use of liquid-friction bearings for the backing rolls of the roughing section; reductorless drive of the seventh to tenth stands of the finishing section. Deficiencies are: poor wear resistance of bottom girders of furnaces; insufficient insulation of evaporation pipes; unsatisfactory arrangement of charging devices. In the roughing section the authors criticize: insufficient power of the scale-breaker driving motor; the use of cast iron working rolls instead of steel ones; large interaxial distance between the rolls of the first vertical and second roughing stand; cast iron parts of transmission gears on the main

Card 1/2

ISUPOV, G.F.; SUD'YA, V.P.; DENISOV, P.I.

Mechanizing slab removal from holding furnaces. Metallurg 7 no.6:32-33 Je '62. (MIRA 15:7)

1. Magnitogorskiy metallurgicheskiy kombinat i Magnitogorskiy gosudarstvennyy soyuznyy institut po proyektirovaniyu metallurgicheskikh zavodov.
(Furnaces, Heating--Maintenance and repair)
(Materials handling)

SUDYAKIN, G. P.

USSR/Chemistry - Alkaloids Jun 52

"The Alkaloids of Haplophyllum perforatum, H. pedicellatum, H. dubium, H. bucharicum, H. versicolor," S. Yunusov, G. P. Sudyakin, Lab of Alkaloid Chem, Inst of Chem, Acad Sci Uzbek SSR, Tashkent

"Zhur Obshch Khim" Vol XXII, No 6, pp 1055-1061

Obtained the following alkaloids from the leaves, buds, and young stems of Haplophyllum perforatum (M.B.) Kar.et Kir.: scimmianine, a cryst base with mp 110-111°, and the new alkaloid haploperine $C_{15}H_{13}NO_4(OCH_3)_2$, mp 155-156°. Obtained the hydrochloride of haploperine (mp 129-131°) and hexahydrophaploperine $C_{17}H_{25}NO_6$(mp 159-160°). Haploperine

218T28

USSR/Chemistry - Alkaloids (Contd) Jun 52

reacts with acids to form $C_{17}H_{17}NO_5$, mp 138-139°. Under the action of CH_3I it forms the isomeric compd $C_{14}H_{13}O_4(=CO)(=N-CH_3)(OCH_3)$. It obviously is a quinoline deriv. The alkaloids are contained mostly in the leaves and seeds. Investigated the alkaloid content of the above plants.

218T28

GUSEINOV, A.M.; ASADOV, I.G.; PEYSIKOV, Yu.V.; SHATSOV, A.N.; SUDZHADINOV, R.Ya.; ALIYEV, M.B.

Experience in using the marine radiometric survey method in the Azerbaijan S.S.R. Sov.geol. 6 no.3:124-133 Mr '63. (MIRA 16:3)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut po dobyche nefti.

(Azerbaijan--Radioactive prospecting)

SPIRIN, B.G., kand.med.nauk; SUDZHAL'SKAYA, L.P.

Disorders of unconditioned vascular reactions in tumors of the diencephalic region. Probl.sovr.neirokhir. 3:301-310 '59. (MIRA 16:6)

(DIENCEPHALON—TUMORS) (REFLEXES)
(BLOOD—CIRCULATION, DISORDERS OF)

SUDZHAL'SKAYA, L.P.

Study of the dynamics of vascular reactions in a cute irritation of the diencephalic area during neurosurgical operations. Probl. sovr.neirokhir. 4:194-202 '62. (MIRA 16:2)
(DIENCEPHALON—SURGERY) (PITUITARY BODY—SURGERY)

[illegible], N. I.

Dissertation: "High Mountain Forests of the Kazbegskiy Rayon and Their Economic Importance." Cand Agr Sci, Georgian Agricultural Inst, 20 Apr 54. (Zarya Vostoka, Tbilisi, 3 Apr 54)

SO: SUM 203, 19 Oct 1954

SUDZHASHVILI, B.I.

Forest types in the eastern extremity of the Trialet Range and their natural reproduction. Trudy Inst.lesa AN Gruz.SSR 11:169-182 '62. (MIRA 16:2)

(Trialet Range--Forest ecology)
(Trialet Range--Forest reproduction)

SUDZHASHVILI, B.I.

Types of beech forests in the Trialet Range. Trudy Inst. lesa AN Gruz. SSR 10:161-171 '62. (MIRA 17:3)

SUDZHASHVILI, B.I.

Forest types in the Dzama Gorge. Trudy Inst. lesa AN Gruz.SSR 12: 209-215 '63. (MIRA 18:2)

SUDZHAYEV, G.A.

Ease of culturing diphtheria bacilli. Lab.delo 3 no.6:27-28 N-D '57.
(MIRA 11:2)

1. Iz sanitarno-epidemiologicheskoy stantsii Stalinskogo rayona g. Minska.
(CORYNEBACTERIUM DIPHTHERIAE)